



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,618	06/04/2001	Kyou-Woong Kim	678-686 (P9826)	4052
28249	7590	11/10/2004	EXAMINER	
DILWORTH & BARRESE, LLP 333 EARLE OVINGTON BLVD. UNIONDALE, NY 11553			NG, CHRISTINE Y	
			ART UNIT	PAPER NUMBER

2663

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/873,618	Applicant(s) KIM ET AL.	
	Examiner Christine Ng	Art Unit 2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 is/are allowed.
- 6) ☒ Claim(s) 3-5, 8-10 and 12-16 is/are rejected.
- 7) ☒ Claim(s) 1, 2, 6, 7 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/06/02, 05/24/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 6 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,154,454 to Abe.

Referring to claim 6, Abe discloses in Figure 1 a method for selecting a RACH.

The method comprises the steps of:

Receiving RACH system information message (broadcast) from a UTRAN (base station 10), and determining a total number of RACHs available in a cell depending on the received RACH system information (broadcast). The base station 10 sends broadcasting information to the mobile stations 40 including information about "the number of channels about frequencies, a channel number about the code channel (spreading code) and the number of time slots". Refer to Column 6, lines 46-62.

Selecting a scrambling code (spreading code) for one of the RACHs using the determined total number of the RACHs and a unique identifier (MSID) of a UE (mobile station 40). The mobile station 40 divides the MSID of the mobile station 40 by the number of channels, and then "recognizes the respective remainders as values

representing the frequency band, the code channel (spreading code) and the time slot".
Refer to Column 6, lines 46-62.

Referring to claim 7, Abe discloses that the selected scrambling code (spreading code) has a serial number defined as a remainder obtained by dividing the unique identifier (MSID) of the UE (mobile station 40) by the total number of the RACHs. Refer to the rejection of claim 1 and Column 6, lines 46-62.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,581,547 to Umeda et al in view of U.S. Patent No. 5,430,760 to Dent.

Referring to claim 1, Umeda et al disclose in Figures 3 and 12 a method for selecting a RACH scrambling code from a plurality of scrambling codes by a UE (Figure 3, MS 12) in a CDMA mobile communication system including a UTRAN (Figure 3, base station 11). The method comprises the steps of:

Storing information for a plurality of scrambling codes (Figure 12, spreading code number in table 38B) having serial numbers (Figure 12, serial number in table 38B) associated with RACHs. Refer to Column 9, lines 7-22.

Selecting (Figure 12, spreading code selector 38) a scrambling code from a

plurality of scrambling codes (Figure 12, spreading code number in table 38B) by a UE, wherein each UE selects the scrambling code from the plurality of scrambling codes using a unique identifier (Figure 12, random generating part 38A) specified by each of the plurality of UEs. Random generating part 38A generates a random number corresponding to a serial number in table 38B to determine a spreading code to be used by the mobile station. Refer to Column 9, lines 7-22.

Umeda et al do not disclose that the information for a plurality of scrambling codes (Figure 12, spreading code number in table 38B) having serial numbers (Figure 12, serial number in table 38B) associated with RACHs is transmitted from the UTRAN to the UE.

Dent discloses that "each mobile station random access message transmission uses a scrambling code selected from several available scrambling codes" that are "indicated in a broadcast message transmitted by the base station 20" (Column 9, lines 58-64). Refer to Column 9, line 64 to Column 10, line 17. Each scrambling code is associated with a code number (Column 14, line 63 to Column 15, line 9). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the information for a plurality of scrambling codes having serial numbers associated with RACHs is transmitted from the UTRAN to the UE, the motivation being so that the mobile station does not need to store too much information; thereby reducing the complexity of the mobile station and conserving energy and memory.

Referring to claim 2, Umeda et al do not specifically disclose that the scrambling

code selected by the UE has a serial number defined as a remainder obtained by dividing the specified unique identifier by a total number of the plurality of scrambling codes.

However, Umeda et al disclose that "if a plurality of control channels are provided in the CDMA scheme through use of a plurality of spreading codes,... each mobile station selects one control channel which is determined by the identification number of the mobile station". For example, "the identification number is divided by the number of control channels and the control channel corresponding to an integral value of the remainder is selected". Refer to Column 3, lines 2-10. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the scrambling code selected by the UE has a serial number defined as a remainder obtained by dividing the specified unique identifier by a total number of the plurality of scrambling codes, the motivation being in order to provide a method to select a scrambling code unique to each UE.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,621,803 to Halton et al in view of U.S. Patent No. 6,477,670 to Ahmadvand.

Halton et al disclose in Figures 2-4 a method selecting a RACH, comprising the steps of:

Determining an ASC (Figure 2, groups 21-23) associated with a unique access

class of a UE (Figure 3). Each UE is classified according to whether it is making an initial access attempt, packet data access attempt or voice call access attempt. Refer to Column 4, lines 7-36.

Receiving (Figure 3, receiving means 28) mapping information message (broadcast on BCCH) between the ASC and PRACH from the UTRAN (Figure 4) and analyzing ASCs (Figure 2, groups 21-23) and scrambling codes (preamble signatures) to be used for available RACHs associated with each of the ASCs (Figure 2, groups 21-23) based on the received mapping information (broadcast on BCCH). The base station broadcasts how the preamble signatures are allocated to each random access time slot for each group 21-23. Refer to Column 1, lines 36-49 and Column 4, line 66 to Column 5, line 5.

Mapping (Figure 4, means 34) the analyzed scrambling codes (preamble signatures) to scrambling code groups (Figure 2, groups 21-23) associated with the ASCs (Figure 2, groups 21-23). Means 34 divides the preamble signatures among groups 21-23 depending on the type of access attempt, current traffic level, quality of service, etc. Refer to Column 4, lines 7-36 and Column 5, lines 19-26.

Selecting (Figure 3, means 30) a scrambling code group (Figure 2, groups 21-23) associated with the determined ASC (Figure 2, groups 21-23). The mobile unit selects one of groups 21-23 based on its type of access attempt. Refer to Column 4, lines 55-62 and Column 5, lines 5-14.

Selecting (Figure 3, means 30) one of the scrambling codes (preamble signatures) using a total number of the scrambling codes (number of available slots in

each of groups 21-23) mapped to the selected scrambling code group (Figure 2, groups 21-23) and a unique identifier (type of access attempt) of the UE. The mobile unit chooses a random access time slot with a preamble signature. Refer to Column 4, lines 55-62 and Column 5, lines 5-14.

Halton et al do not disclose that determining an ASC (Figure 2, groups 21-23) associated with a unique access class of a UE (Figure 3) is done by analyzing a RRC message received from a UTRAN.

Ahmadvand discloses in Figure 3 that a RRC unit 44 translates quality of service requirements for each received packet into classes of service and prioritizes packets based on their QoS requirements. Refer to Column 6, lines 22-33. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that that determining an ASC associated with a unique access class of a UE is done by analyzing a RRC message received from a UTRAN, the motivation being that RRC is a layer of the UMTS radio interface responsible for controlling the UMTS radio interface RLC and MAC layers and guaranteeing a specified quality of service.

Allowable Subject Matter

6. Claim 17 is allowed.
7. Claims 3-5, 8-10 and 12-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (571) 272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Ng ³⁰
October 29, 2004


CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600